

Kirill Ryzhikov

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EDUCATION

Moscow State University

Moscow, Russia

Bachelor of Computational Mathematics and Cybernetics, department of Mathematical Statistics Aug. 2019 – July 2023

EXPERIENCE

Research and Development engineer

March 2021 – Present

Tinkoff, AI Technology Center

Moscow, RU

- Creating platform for talking heads and deep-fake generation for commercial use cases.
- Implemented real-time video from speech generation algorithm for 2d photo-realistic and 3d generation.
- Using PyTorch, CUDA, Docker, Redis, FastAPI

Junior ML Researcher

March 2020 – March 2021

Fintech Lab at MIPT associated with Tinkoff

Moscow, RU

- Performed research on talking heads generation for Russian speaker.
- Created Russian audio-visual dataset from different sources, using specially created pipeline.
- Developed MVP demo of talking heads generation from speech.
- Wrote the publication for AI conference.
- Used PyTorch, Docker

ML/DL mentor

Dec 2020 – Present

Tinkoff.Generation

Moscow, RU

- Conducting lectures about DL basics in Computer Vision, Media generation.
- Checking homeworks, preparing quizzes.

PUBLICATIONS

63 All Russian science conference at MIPT

Moscow, RU, 2020

Building facial expressions of a person from the recording of his speech *Diploma for best presentation in AI section*

- Created architecture for facial key points sequence generation from speech
- Researched application of Harmonic Convolutions in Speech Embedding task
- Researched application of AutoVC like architectures for speech splitting to style and content
- Used PyTorch, Docker

PROJECTS

PaletteAPI | Python, FastAPI, OpenCV | GitHub

Dec 2020

- Developed API for major colours palette extraction from image
- Implemented image quantization algorithms for real-time inference

PixIt | Python, TeleBot, OpenCV, Sklearn | GitHub

Mar 2021

- Developed API for image pixelisation using major colours.
- Implemented telegram bot for testing and customer development

TECHNICAL SKILLS

Languages: Python, C(C99), C++17

DBMS: MongoDB

Frameworks: PyTorch, Tensorflow, FastAPI, Flask, Telebot

Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Vim, bash

Libraries: pandas, NumPy, Matplotlib, Pytorch-Lightning

CROC-It-solution school <i>Android, Java, Firebase</i> <ul style="list-style-type: none">• 1-st place at social apps sections	2018
Sber.Hack <i>Android, Java, Python, Numpy</i> <ul style="list-style-type: none">• 2-nd place overall with project for detecting epilepsy attack Epi.Detect	2018
Acadoton <i>Android, Java, Python, Numpy, OpenCV, Arduino</i> <ul style="list-style-type: none">• 4-nd place overall with project of smart lock for easy flat sharing or rent	2018
Hack.Moscow <i>Android, Java, Python, Numpy</i> <ul style="list-style-type: none">• 2nd place in Healthcare track with Stroke.Detect app for strokes detection	2018